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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,451	10/27/2003	Balasubramanian Ramachandran	SK990003C1	8905

7590 03/23/2005

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EXAMINER

GELIN, JEAN ALLAND

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,451

Applicant(s)

RAMACHANDRAN,
BALASUBRAMANIAN

Examiner

Jean A Gelin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-64 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11, 12, 28, 29, 42, 46-48, 52-54, and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Samson (US 5,590,402).

Regarding to claims 11, 28, and 42 Samson teaches a multi-mode transmitter system comprising: a mode selector for selecting a mode of operation of a transmitter (i.e. mode select signal 106, col. 2, lines 29-40); and a controller that adjusts the operating current of at least part of the transmitter responsive to the mode selector (i.e. A microprocessor used to control transmitter, col. 2, lines 35-67).

Regarding to claims 12, 29, Samson teaches the mode selector is configured to select a mode responsive to a command received over a user interface (i.e. manually adjust the dual-mode transmitter, col. 1, lines 41-50).

Regarding to claims 46, 47, 52, and 53, Samson teaches applying the operating current to at least part of the transmitter or a radio frequency front-end of the transmitter (i.e. varying deviation level is equivalent to varying power of the transmitter, col. 2, lines 30-65).

Regarding to claims 48, 54, and 59, the claims are interpreted and rejected for the same reason as set forth in the rejection of claim 11 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13, 17-19, 21, 22, 24, 30, 34-36, 39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samson in view of Tomick et al. (US 6,317,607).

Regarding to claims 13, 30, Samson teaches all the limitations above wherein the mode selector is configured to select a mode from the following group: voice transmission, data rate transmission.

However, the preceding limitation is very well known in the art of communications, as evidenced by Tomcik. Tomcik teaches selecting a mode of communication in a multi-mode wireless communication system to identify the preferred mode of communication (col. 2, lines 50-65). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have implemented the techniques of Tomcik within the system of Samson in order to avoid interruptions from other calls while the telephone is engaged in certain mode of communication.

Regarding to claims 17, 18, 34, and 35 Samson teaches all the limitations above except the transmitter is a spread spectrum also called a code division multiple access transmitter.

However, code division multiple access, also called spread spectrum, is a name for a new form of digital cellular phone service. Tomcik teaches that in voice communication mode, audio information is transmitted using wireless communication modulation techniques such as CDMA (col. 5, lines 15-45). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have implemented the wireless communication modulation techniques such as CDMA within the system of Samson in order to increase the system capacity and more efficiently use the spectrum.

Regarding to claims 19, 36, Samson in view of Tomcik inherently teaches the transmitter has a radio frequency front-end and the controller is configured to dynamically determine the operating current for at least part of the radio frequency front end (col. 28-67).

Regarding to claims 21, 22, 24, 38, 39, 41, Samson teaches all the limitations above except wherein the system is a communication device which is a mobile unit.

However, the preceding limitation is very well known in the art of communications, as evidenced by Tomcik. Tomcik teaches assigning a multi-mode wireless device such as wireless devices 100n to each user to access the communication system (col. 4, lines 1-28). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have implemented the techniques of Tomcik within the system of Samson in order for the user of the wireless communication device to select his preferred communication mode.

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5. Claims 13, 17-19, 21, 22, 24, 30, 34-36, 39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samson in view of Tomick et al. (US 6,317,607) further in view of Chen et al. (US 6,373,823).

Regarding to claims 23, 40, Samson in view of Tomcik teaches all the limitations above except that the desired transmit power of the transmitter is determined by a base station in communication with the mobile unit and exercising closed loop power control over the mobile unit.

However, the preceding limitation is very well known in the art of communications, as evidenced by Chen. Chen teaches, in closed loop power control, the power control commands consist of a series of one bit up/down commands to which base station responds by increasing or decreasing the transmission energy of forward link signal (col. 4, lines 14-35). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have implemented the techniques of Chen within the system of Samson and Tomcik in order for the base station to continue transmitting at the current transmission energy of forward link signals when base station does not respond to power control command from mobile station.

Allowable Subject Matter

6. Claims 1-10, 25-27, and 64 are allowed.
7. Claims 14-16, 20, 31-33, 37, 43-45, 49-51, 55-58, and 60-63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is an examiner's statement of reasons for allowance: the prior art teaches a dual mode transmitter which transmit signals of varying deviation levels in communication systems and adjusting the voice deviation based on the transmitter mode.

On the other hand, the Applicant teaches and a controller that adjusts the operating current of at least part of the multi-mode transmitter responsive to the mode selector, the controller further including first, second, and third sub-modules, wherein the first sub-module is configured to determine a base linearity responsive to the selected mode, where the base linearity is responsive to a crest factor associated with the selected mode, the second sub-module is configured to adjust the base linearity responsive to a desired transmit power, and the third sub-module is configured to determine the operating current responsive to the adjusted base linearity. These limitations, in conjunction with all the limitations of the independent and dependent claims, have not been disclosed, taught or made obvious over the prior art of record.

The prior art of record considered alone or in combination neither anticipates nor renders obvious wherein the radio frequency front-end of the spread spectrum transmitter includes an ultra high frequency mixer and a pre-driver amplifier, and the controller is configured to dynamically determine the operating current of the ultra high frequency mixer and the pre-driver amplifier, in conjunction with all the limitations of the independent and dependent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of reasons for Allowance."

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-64 rejected under the judicially created doctrine of double patenting over claims 1-58 of U. S. Patent No. 6,674,999 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: A communication device having a system for dynamically varying the operating current of at least part of a multi-mode transmitter comprising: a mode selector for selecting a mode of operation of the multi-mode transmitter, wherein the mode selector is configured to select a mode responsive to a command received over a user interface; and a controller that adjusts the operating current of at least part of the multi-mode transmitter responsive to the mode selector, the controller further

including first, second, and third sub-modules, wherein the first sub-module is configured to determine a base linearity responsive to the selected mode, where the base linearity is responsive to a crest factor associated with the selected mode, the second sub-module is configured to adjust the base linearity responsive to a desired transmit power, and the third sub-module is configured to determine the operating current responsive to the adjusted base linearity.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rasanen et al. teaches high speed data transmission in mobile communication networks.

Vembu teaches system and method for optimizing power control.

Bauml et al. teaches method and device for reducing the crest factor in digital transmission procedures.

Raniere et al. teaches intelligent switching system for voice and data.

Wang et al. teaches dual mode transmitter.

Black et al. teaches dual-mode digital FM communication system.

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Rotstein et al. teaches method and apparatus for spreading and despreding data in a spread-spectrum communication system.

Luz teaches multi-mode transmitter and receiver.

Plocher teaches communication system for preventing interference between wireless devices.

Abrishamkar teaches rate detection for multi-rate communications.

Mucke et al. teaches spread spectrum radiotelephone having adaptive transmitter gain control.

Waldroup et al. teaches saturation prevention system for radiotelephone with open and closed loop power control systems.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A Gelin whose telephone number is (703) 305-4847. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (703) 306-0003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 21, 2005

JG

JEAN GELIN

EXAMINER

jean Allard Gelin